

## Patent Abstracts of Japan

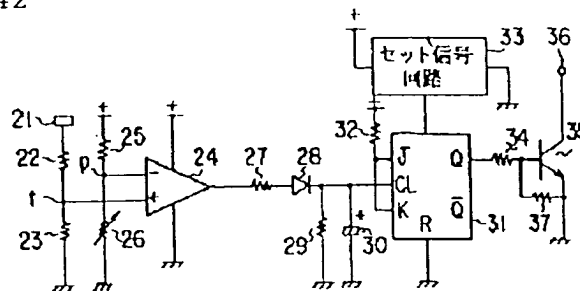
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 PATENTEE : TEC CORP  
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TITLE : TOUCH CHANGEOVER SWITCH  
 CIRCUIT



ABSTRACT : PURPOSE: To turn on/off an FF output corresponding to the touch noise voltage of a touch terminal by outputting a high-order signal from a comparator when a divided voltage exceeds a reference voltage, smoothing that output with a capacitor and performing an inverting operation at a JKFF in response to this smoothed signal.  
 CONSTITUTION: When a human body touches a touch terminal 21, a noise-shaped fine current flows from the tip of a finger through resistors 22 and 23, and the noise-shaped divided voltage to be aV at a maximum is generated at a junction (t) of the resistors 22 and 23. Then, a comparator 24 outputs a pulse-shaped signal which becomes the high-order signal only when the divided voltage exceeds a reference voltage sh. This voltage is smoothed by a capacitor 30, and the smoothed signal in the shape of a rectangular wave is inputted to a clock input terminal CL of a J-KFF 31. This FF 31 outputs a rectangular wave signal from an output terminal Q by performing the inverting operation in response to the rise of the smoothed signal. Namely, the output signal from the output terminal Q of the J-KFF 31 is alternately inverted to the high order and the low order at the time of first touch after a power source is turned on, and a load connecting terminal 36 is switched.

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Touch switch circuit e.g. for controlling luminaire - uses voltage divider network, reference voltage generator, comparator and capacitor to toggle JK flip-flop on touching touch terminal and produce output accordingly

Patent Assignee: TOKYO ELECTRIC CO LTD (TODK )

Number of Countries: 001 Number of Patents: 001

Patent Family:

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Patent Details:

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**Abstract (Basic):** JP 7131322 A

The switching circuit employs a voltage divider network comprises of resistor (22, 23). The reference voltage is obtained through another divider network consisting of one fixed value resistor (25) and one variable resistor (26). The reference voltage and the voltage signal obtained from centre tap (t) of the first divider network connected to touch terminal (21) are fed to a comparator (24).

When the divider output voltage exceeds the reference voltage the comparator outputs a high level signal to a smoothing capacitor (30). This smoothed and filtered signal is then fed to a clock terminal (CL) of a flip flop (31). The JK flip flop in turn toggles ON or OFF accordingly to its previous state.

ADVANTAGE - Reduces variation in touch-sensitivity.

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Title Terms: TOUCH; SWITCH; CIRCUIT; CONTROL; LUMINAIRE; VOLTAGE; DIVIDE; NETWORK; REFERENCE; VOLTAGE; GENERATOR; COMPARATOR; CAPACITOR; TOGGLE; JK ; FLIP-FLOP; TOUCH; TOUCH; TERMINAL; PRODUCE; OUTPUT; ACCORD

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